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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,085	04/24/2006	Ajay Kapoor	NL03 1245 US1	1178
65913	7590	06/29/2007		
NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER O NEILL, PATRICK	
			ART UNIT 2816	PAPER NUMBER
			NOTIFICATION DATE 06/29/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary	Application No. 10/577,085	Applicant(s) KAPOOR, AJAY	
	Examiner Patrick O'Neill	Art Unit 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 10 is/are rejected.
- 7) ☒ Claim(s) 6-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>04/24/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: A switching circuit for handling signal voltages greater than the supply voltage.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Katayama et al. (US patent 5,994,744).

(1) regarding claim 1:

Katayama et al. discloses a switch comprising:

a first transistor (Q10 in Figure 27) with main electrodes constituting in/outputs of the switch and with a control electrode constituting a first control input of the switch for in response to a first control signal controlling the first transistor (Figure 27 and column 8, lines 29-32);

a second transistor (Q20 in Figure 27) with main electrodes constituting the in/outputs of the switch and with a control electrode constituting a second control input

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of the switch for in response to a second control signal controlling the second transistor (Figure 27 and column 8, lines 29-32); and

a circuit (1030 and INV4 in Figure 27) for in response to the first control signal (output of INV3 in Figure 27) and an in/output signal (V_i in Figure 27) at an in/output of the switch generating the second control signal (output of INV4 in Figure 27)

(2) regarding claim 2:

Switch as defined in claim 1, wherein the circuit comprises:

A generator (1030 and INV4 in Figure 27) for, in an enable mode with first control signal having a first value, generating the second control signal having a second value (column 22, lines 40-48).

(3) regarding claim 3:

Switch as defined in claim 1, wherein the circuit further comprises:

a detector for (53 in Figure 27), in a disable mode with the first control signal having the second value, supplying the in/output signal to the generator (1030 and INV4 in Figure 27) for generating the second control signal having the first value in case of a value of the in/output signal being smaller than the first value and having the value of the in/output signal in case of the value of the in/output signal being larger than the first value (column 42, lines 17-51).

(4) regarding claim 4:

Switch as defined in claim 1, further comprising:

A further circuit (Q30 and Q40 in Figure 27) for in response to the first control signal (output of INV3) and an in/output signal (Vi) at an in/output of the switch generating a backgate signal (203 in Figure 27) destined for the second transistor.

(5) regarding claim 5:

Switch as defined in claim 4, wherein the further circuit comprises:

a further generator (Q30 and Q40 in Figure 27) for, in an enable mode with the first control signal having a first value, generating the backgate signal having a value of the in/output signal and for, in a disable mode with the first control signal having a second value, generating the backgate signal having the first value in case of a value of the in/output signal being smaller than the first value and having the value of the in/output signal in case of the value of the in/output signal being larger than the first value (column 27, lines 47-64).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama et al.

(1) regarding claim 10:

Apparatus comprises a switch as defined in claim 1; and

further comprising a first stage coupled to a first in/output of the switch and a second stage coupled to a second in/output of the switch (this should be obvious that the purpose of an switch circuit is to connect a input stage to an output stage).

Allowable Subject Matter

6. Claims 6-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art of record, Katayama et al., fails to disclose the same composition for the generator as shown in Figure 3 and called for in claim 6.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kinugasa et al. (US patent 6,924,694) disclose a switch circuit formed on a semiconductor substrate. Tachibana et al. (US publication 2004/0119522) discloses an analog switch circuit with superior breakdown voltage characteristics that can operate at a high speed at a low power supply voltage. Saito (US patent 6,774,831) discloses an analog switch and an analog multiplexer wherein the switch circuit is arranged by insulating gate type transistors.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick O'Neill whose telephone number is (571) 270-1677. The examiner can normally be reached on Monday-Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PO



LINH MY NGUYEN
PRIMARY EXAMINER